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METHOD TO INCREASE CLASS I PRESENTATION OF EXOGENOUS ANTIGENS BY HUMAN DENDRITIC CELLS

ABSTRACT

Methods and compositions for use of human dendritic cells to activate T cells for immunotherapeutic responses against primary and metastatic cancer are disclosed. In one embodiment, human dendritic cells exposed to a tumor associated antigen, or an antigenic fragment thereof in combination with bacillus Calmette-Guerin (BCG), are administered to a cancer patient to activate a predominantly CD8⁺ T cell response *in vivo*. In an alternate embodiment, human dendritic cells are exposed to a tumor associated antigen or a specific antigenic peptide in combination with BCG *in vitro* and incubated or cultured with primed or unprimed T cells to activate a predominantly CD8⁺ T cell response *in vitro*. The activated T cells are then administered to a cancer patient. Antigen in combination with BCG is processed by dendritic cells through the MHC-CLASS I compartment which provides for a predominantly CD8⁺ T cell response. The addition of LPS provides for a greater number of mature dendritic cells enhancing the T cell response to antigen. Methods and compositions for human dendritic cells with extended life span and cryopreserved dendritic cells are disclosed.

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